

## REMARKS

Initially, the Applicants would like to express gratitude to Examiner Ajibade-Akonai for the time, attention, and effort in conducting the in-person interview concerning this case on July 9, 2009. The amendments and remarks presented herein are consistent with that discussion.

The Final Office Action mailed May 20, 2009 considered claims 10-24. Claims 10-16, and 19-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hakkinen, U.S. Patent No. 5,839,056 (filed Aug. 30, 1996) (hereinafter Hakkinen) in view of Keskitalo et al., U.S. Patent No. 5,570,353 (filed Jan. 11, 1995) (hereinafter Keskitalo). Claims 17, 18 and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hakkinen in view of Keskitalo and Jensen et al., U.S. Patent No. 5,671,219 (filed Jun. 7, 1995) (hereinafter Jensen).<sup>1</sup>

By this response, claims 10-24 are amended and claims 25-41 are newly added. Claims 10-41 remain pending. Support for the amendments may be found, *inter alia*, within Specification as discussed below.<sup>2</sup> Please also note that the claim amendments as presented herein reflect amendments to the claims as previously presented in "Amendment D" filed Mar. 12, 2009.<sup>3</sup>

### **Independent Claims 10, 11, 19 and 20:**

These claims are supported by the upper part of Fig. 43 of the present application. As the examiner suggested in the in-person interview of July 9, 2009, the claims are amended to include "the predetermined control pattern being fixed and invariable." The claims are also amended to clarify that the subject of power control is the first communication apparatus (the communication apparatus). The claims are also amended to clarify that the transmission power control information is received from the second communication apparatus (the another communication apparatus).

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<sup>1</sup> Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

<sup>2</sup> Please note that the present invention and claims as recited take support from the entire Specification. As such, no particular part of the Specification should be considered separately from the entirety of the Specification.

<sup>3</sup> The Examiner had indicated that the amendments and claims in "Amendment E," filed July 17, 2009, "[would] not be entered." See Advisory Action (paper no. 07222009, July 24, 2009).

**Dependent Claims 12 and 13 Depending on Claim 11:**

These claims are supported by the upper part of Fig. 43 of the present application. As the examiner suggested in the in-person interview of July 9, 2009, the claims are also amended to include "the predetermined control pattern being fixed and invariable." The claims are also amended to clarify that the subject of power control is the communication apparatus. Claim 12 is amended to clarify that transmission power of the communication apparatus increases step by step regularly.

**New Dependent Claims 25 and 26 Depending on Claim 10:**

These claims are supported by the upper part of Fig. 43 of the present application. The subject matter of claims 25 and 26 are the same as those of claims 12 and 13.

**New Dependent Claims 29 and 30 Depending on Claim 19:**

These claims are supported by the upper part of Fig. 43 of the present application. The subject matter of claims 29 and 30 are the same as those of claims 12 and 13.

**New Dependent Claims 32 and 33 Depending on Claim 20:**

These claims are supported by the upper part of Fig. 43 of the present application. The subject matter of claims 32 and 33 are the same as those of claims 12 and 13.

**New Dependent Claims 27, 28, 31 and 34:**

These claims are supported by the upper part of Fig. 43 of the present application. These claims define which of the claimed apparatuses is the base station or the mobile station.

**Independent Claims 14, 16, 21 and 23:**

These claims are supported by the lower part of Fig. 43 of the present application. The claims are amended to clarify that the subject of power control is the second communication apparatus (the communication apparatus). The claims are also amended to clarify that the transmission power control information is received from the first communication apparatus (the another communication apparatus). The claims are also amended to clarify that the transmission power control starts with the initial value.

**Dependent Claims 15 and 22 Depending on Claims 14 and 21:**

These claims are supported by the lower part of Fig. 43 of the present application. The claims are reformulated in more suitable wording but without any change in meaning.

**New Dependent Claims 35, 36, 37 and 38:**

These claims are supported by the lower part of Fig. 43 of the present application. These claims define which of the claimed apparatuses is the base station or the mobile station.

**Independent Claims 17 and 24:**

These claims are also supported by the lower part of Fig. 43 of the present application. The claims are also reformulated in more suitable wording but without any change in meaning.

**Dependent Claim 18 Depending on Claim 17:**

Claim 18 is also supported by the lower part of Fig. 43 of the present application. Claim 18 is amended due to the amendment to claim 17 but without any change in meaning.

**New Dependent Claim 40 Depending on Claim 24:**

Claim 40 is also supported by the lower part of Fig. 43 of the present application. The subject matter of claim 40 is similar to that of claim 18.

**New Dependent Claims 39 and 41:**

These claims are supported by the lower part of Fig. 43 of the present application. These claims define which of the claimed apparatuses is the base station or the mobile station.

**Concerning the Rejections and the References Cited in the Office Action of May 20, 2009:**

Hakkinen (US Patent 5839056) discloses improved closed loop power control, in which a base station measures the SIR and the power with respect to a signal received from a mobile station, and sends transmission power control commands CNT based on the measured SIR and power to the mobile station so that the mobile station controls its transmission power based on the power control commands CNT.

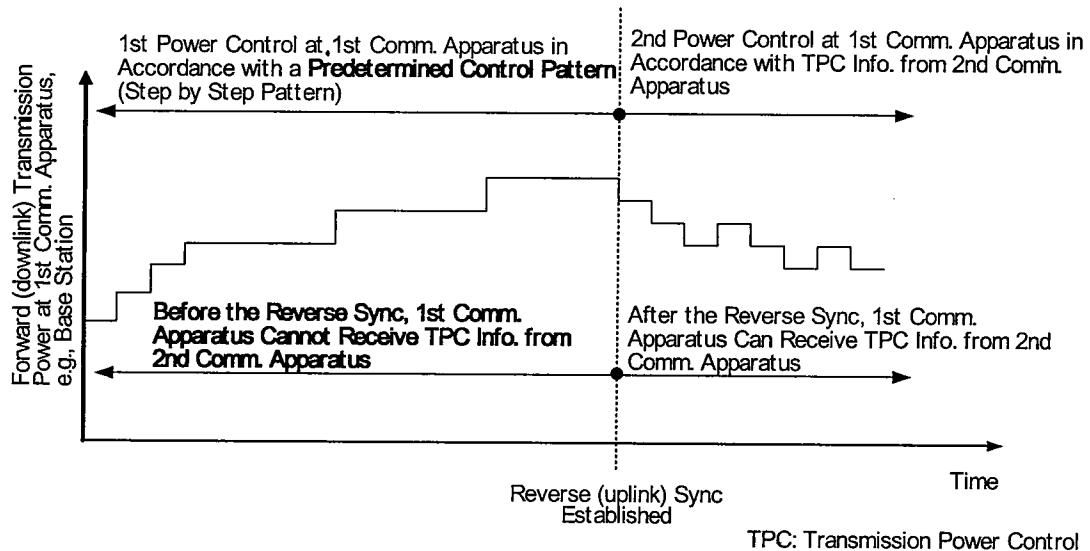
Keskitalo (US Patent 5570353) discloses, on column 1, lines 59-67, open loop power control, in which a station controls its transmission power in accordance with the strength of received signals measured at the station. Keskitalo also discloses, on column 2, lines 1-3, closed power control, in which the base station measures the strength of a signal received from the mobile station, and sends power control messages to the mobile station so that the mobile station controls its transmission power based on the power control messages.

Jensen (US Patent 5671219) discloses, on column 10, lines 59-67, that a the base station 104 sends to a user station 102 a power control command for adjusting the power output level of the user station 102. In addition, the passage on column 20, lines 26-32 of Jensen disclose that the user station 102 and the base station 104 send a control pulse, i.e., the power control command 215.

### **Independent Claims 10, 11, 19, and 20**

Independent claims 10, 11, 19 and 20 define "before the (first) communication apparatus becomes able to receive the transmission power control information," the first control means (or step) of the (first) communication apparatus carries out transmission power control in accordance with a predetermined control pattern. In addition, independent claims 10, 11, 19 and 20 define "after the (first) communication apparatus becomes able to receive the transmission power control information," the second control means (or step) of the (first) communication apparatus carries out transmission power control in accordance with the transmission power control information received from the another (second) communication apparatus.

The gist of independent claims 10, 11, 19 and 20 is illustrated as follows. This drawing is based on the upper part of Fig. 43 of the present application.



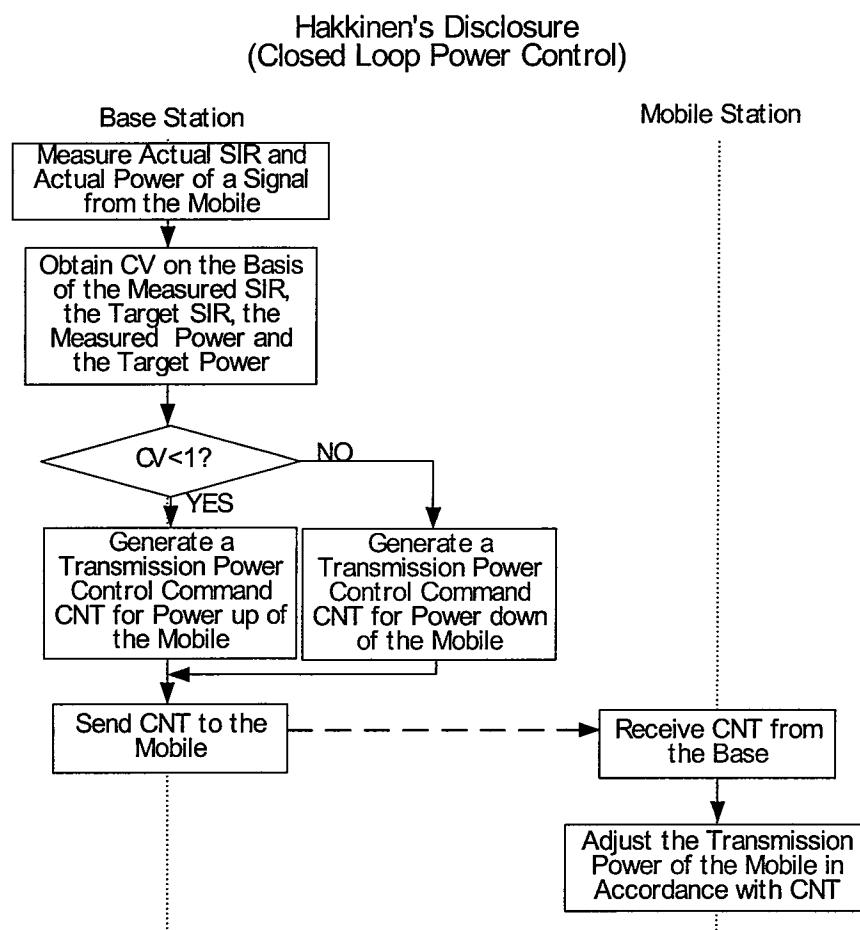
Thus, in independent claims 10, 11, 19 and 20, after the first communication apparatus becomes able to receive the transmission power control information, the first communication apparatus carries out transmission power control in accordance with the transmission power control information (in accordance with instructions by the another (second) communication apparatus). In other words, after the first communication apparatus becomes able to receive the transmission power control information, the first communication apparatus carries out transmission power control in accordance with closed loop power control.

However, *before* the first communication apparatus becomes able to receive the transmission power control information, the first communication apparatus carries out transmission power control in accordance with a "predetermined control pattern" (i.e., not depending on instructions by another (second) communication apparatus). The Applicants submit that the above characteristics of the claims are apparent from the context of the claims.

Consistent with the discussions in the interview of July 9, 2009, *inter alia*, claims 10, 11, 19, and 20 have been amended to particularly point out that the predetermined control pattern is a fixed and invariable pattern (to be distinguished, for example, from an algorithm or method for negotiation).

The Examiner had argued that Hakkinen (US Patent 5839056) discloses a first control means for performing the step of carrying out transmission power control in accordance with a

predetermined control pattern (Fig. 2, column 5, lines 41–62, column 6, lines 1–16) . However, the passage on column 5, lines 41–62 of Hakkinen merely states a process at the base station (the source of the transmission power control commands CN) for determining the transmission power control commands CNT destined for the mobile station. The passage on column 6, lines 1–16 of Hakkinen merely states a process at the mobile station (the destination of the transmission power control commands CNT) which has received the transmission power control commands CNT from the base station. Consequently, Hakkinen discloses improved closed loop power control, but does not teach or suggest a process at the destination of the transmission power control commands for controlling its transmission power control before the destination apparatus can receive the transmission power control commands.



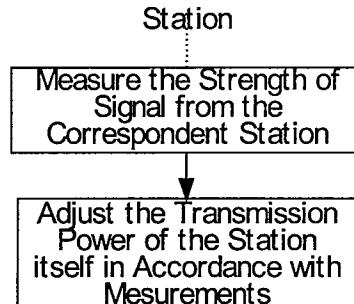
Contrary to the Examiner's argument, Hakkinen does not disclose a "predetermined control pattern" determined in advance in the (first) communication apparatus and is independent of another (second) communication apparatus. Dictionaries define the word "pattern" as "a consistent, characteristic form, style, or method" or "the regular way in which something happens, develops, or is done," so that "pattern" does not mean a mere method or a mere way.

Furthermore, the claimed wording is limited by the adjective "predetermined". Dictionaries define the adjective "predetermined" as "determined, decided, or established in advance." In the closed loop power control stated in Hakkinen, the transmission power control commands CNT depend on the SIR and power of received signals, which varies over time. In the process of Hakkinen, if  $CV < 1$ , the base station instructs the mobile station to increase the transmission power of the mobile station, whereas if  $CV > 1$ , the base station instructs the mobile station to decrease the transmission power of the mobile station. Therefore, the station receiving the transmission power control commands CNT cannot control its transmission power in accordance with a "predetermined control pattern" (consistent or regular control way determined in advance) determined in advance in the (first) communication apparatus and is independent of another (second) communication apparatus.

The Examiner argues that the open loop power control disclosed on column 1, lines 59–67 of Keskitalo (US Patent 5570353) is related to the control pattern defined in independent claims 10, 11, 19 and 20 of the present application. However, dictionaries define the word "pattern" as "a consistent, characteristic form, style, or method" or "the regular way in which something happens, develops, or is done", so that "pattern" does not mean a mere method or a mere way.

Furthermore, the claimed wording is limited by the adjective "predetermined." Dictionaries define the adjective "predetermined" as "determined, decided, or established in advance." In the open loop power control stated in Keskitalo, a station controls its transmission power in accordance with the strength of received signals, which varies over time. Therefore, the station cannot control its transmission power in accordance with a "predetermined control pattern" (consistent or regular control way determined in advance) determined in advance in the (first) communication apparatus and is independent of another (second) communication apparatus.

**Keskitalo's Disclosure on Column 1  
(Open Loop Power Control)**

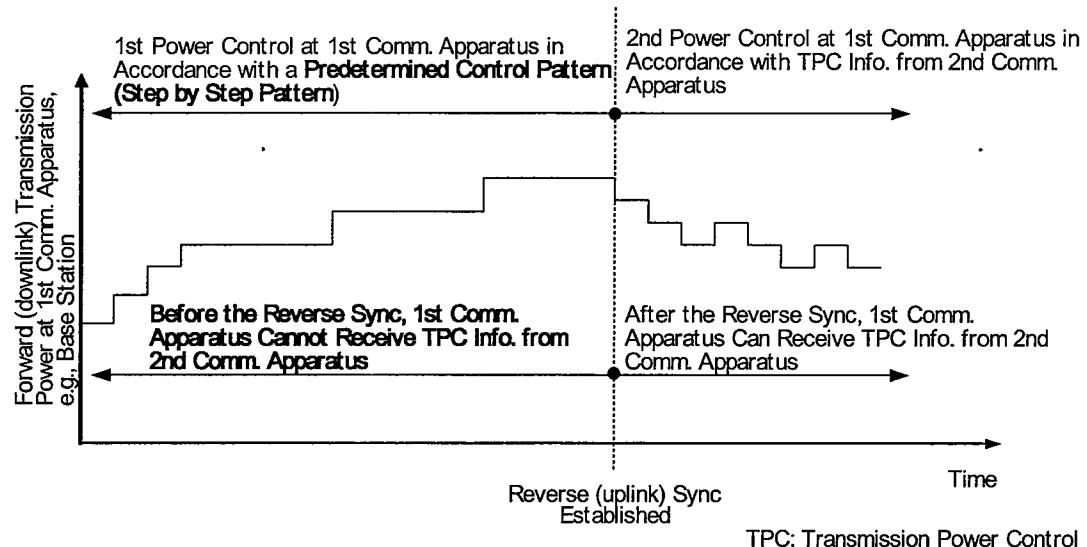


Thus, neither Hakkinen nor Keskitalo discloses that "before the (first) communication apparatus becomes able to receive the transmission power control information from the (another) communication apparatus," the (first) communication apparatus controls its transmission power in accordance with a "predetermined control pattern". Even if Hakkinen and Keskitalo were combined, the result could not teach or suggest the subject matter of independent claims 10, 11, 19 and 20 as presented.

**Dependent claim 12**

Further to the features in independent claim 11, claim 12 defines that the predetermined control pattern is a fixed and invariable pattern for increasing transmission power step by step regularly.

The gist of dependent claim 12 is illustrated as follows. This drawing is based on the upper part of Fig. 43 of the present application.



The Examiner argued that Hakkinen discloses the predetermined control pattern for increasing the transmission power step by step (increasing the power based on a power-up message applied based on determination of factor CV to be less than one ( $CV < 1$ ), see column 5, lines 41-59). However, as described above, the process disclosed in Hakkinen is a process at the base station (the source of the transmission power control commands CNT) for determining the transmission power control commands CNT destined for the mobile station. This is not related to a process at the destination of the transmission power control commands for increasing the transmission power step by step regularly before the destination apparatus can receive the transmission power control commands.

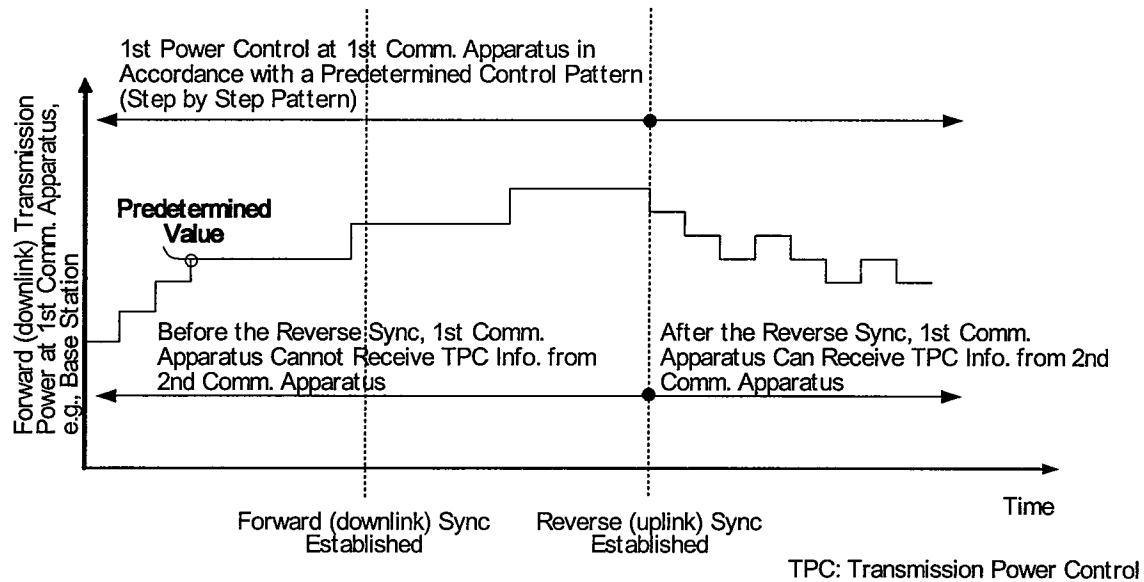
In addition, in the process of Hakkinen, if  $CV < 1$ , the base station instructs the mobile station to increase the transmission power of the mobile station, whereas if  $CV > 1$ , the base station instructs the mobile station to decrease the transmission power of the mobile station. The Hakkinen's process is not related to the claimed fixed and invariable predetermined control pattern determined in advance in the (first) communication apparatus and independent of another communication apparatus.

Thus, no combination of references teaches or suggests claim 12 as presented.

### Dependent Claim 13

Further to the features in dependent claim 12, claim 13 defines that the predetermined control pattern is a fixed and invariable pattern for increasing the transmission power to a predetermined value, and subsequently, less rapidly increasing the transmission power.

The gist of dependent claim 13 is illustrated as follows. This drawing is based on the upper part of Fig. 43 of the present application.



As described above, the process disclosed in Hakkinen is a process at the base station (the source of the transmission power control commands CNT) for determining the transmission power control commands CNT destined for the mobile station. This is not related to a process at the destination of the transmission power control commands for controlling its transmission power control before the destination apparatus can receive the transmission power control commands.

In addition, in the process of Hakkinen, if  $CV < 1$ , the base station instructs the mobile station to increase the transmission power of the mobile station, whereas if  $CV > 1$ , the base station instructs the mobile station to decrease the transmission power of the mobile station. The Hakkinen's process is not related to the claimed "predetermined control pattern" (consistent or regular control way determined in advance) determined in advance in the (first) communication apparatus and is independent of another (second) communication apparatus.

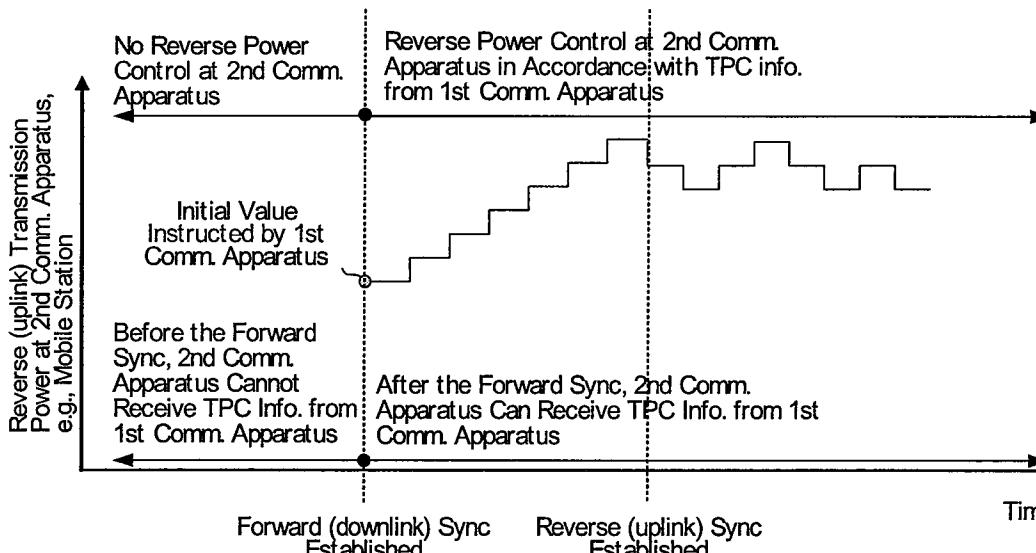
Thus, no combination of references teaches or suggests claim 13 as presented.

### Independent Claims 14, 16, 21, and 23

Independent claims 14, 16, 21, and 23 define that after the second communication apparatus becomes able to receive the transmission power control information from the first communication apparatus, the control means (or step) of the (second) communication apparatus carries out transmission power control in accordance with the transmission power control information received from the first communication apparatus. In other words, after the second communication apparatus becomes able to receive the transmission power control information, the control means (or step) of the second communication apparatus carries out transmission power control in accordance with closed loop power control.

In addition, independent claims 14, 16, 21, and 23 defines that the control means (step) sets an initial value of transmission power in accordance with the information regarding the initial value of the transmission power and starts the transmission power control with the initial value.

The gist of independent claims 14, 16, 21, and 23 is illustrated as follows. This drawing is based on the lower part of Fig. 43 of the present application.



TPC: Transmission Power Control

The Examiner argued that Keskitalo discloses a mobile station comprising a second transmission means for performing the step of transmitting information regarding an initial value of transmission power of the second communication apparatus (mobile transmitting signal strength to the base station so that the base can measure the signal strength, column 2, lines 1–3); the second communication apparatus's second reception means performs the step of receiving the information regarding the initial value of the transmission power from the first communication apparatus (mobile transmitting signal strength to the base station so that the base can measure the signal strength, column 2, lines 1–3), and the control means performs the steps of setting a initial value of transmission power in accordance with the information regarding the initial value of the transmission power and starts the transmission power control with the initial value.

However, column 2 of Keskitalo discloses that the base station measures the strength of a signal received from the mobile station, and sends power control messages to the mobile station so that the mobile station controls its transmission power based on the power control messages. This passage merely states closed loop power control, which is similar to the Hakkinen's disclosure. Keskitalo does not disclose or suggest the claimed "initial value." Keskitalo does not disclose or suggest the claimed "information regarding the initial value." The adjective "initial" means beginning or the first. The Applicants submit that Keskitalo fails to teach or suggest an "initial value" with which the closed loop power control starts

In closed loop power control, as disclosed in the passages from column 1, lines 64 to column 2, line 5, and on column 2, line 26–33, a station measures the SIR with respect to a signal received from the correspondent station, and sends transmission power control information based on the measured SIR to the correspondent station. Although the transmission power control information instructs the correspondent station to raise or lower the transmission power of the correspondent station, the transmission power control information does not indicate the initial value of transmission power. According to general knowledge of those skilled in the art, information regarding the initial value of transmission power is not exchanged between stations. Therefore, the subject matter of claims 14, 16, 21, and 23 is novel.

The Applicants further submit that the signal strength may not properly be interpreted as "information." Dictionaries define the word "information" as "knowledge communicated or received concerning a particular fact or circumstance" or "the meaning given to data by the way

it is interpreted". The signal strength measured at the receiver is not given any meaning by the sender.

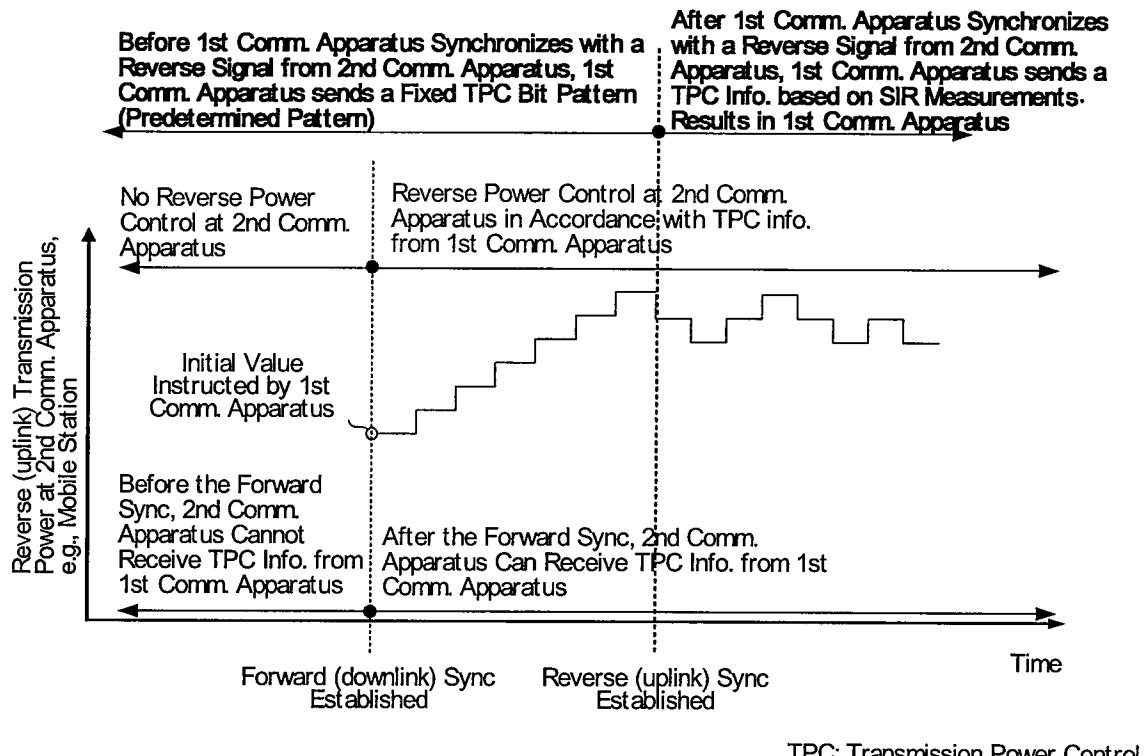
Thus, neither Hakkinen nor Keskitalo discloses that the second transmission means for (step of) transmitting information regarding an initial value of transmission power of another (second) communication apparatus to the another (second) communication apparatus. Neither Hakkinen nor Keskitalo discloses the claimed second reception means (or step). Neither Hakkinen nor Keskitalo discloses that control means (step) sets an initial value of transmission power in accordance with the information regarding the initial value of the transmission power and starts the transmission power control with the initial value, in which the information regarding the initial value is received from another apparatus. Even if Hakkinen and Keskitalo were combined, the combination does not teach or suggest the subject matter of independent claims 14, 16, 21, and 23 as presented.

### **Dependent claim 15 and 22**

Further to the elements recited in independent claims 14 and 21, claims 15 and 22 define that the first transmission means (step) of the first communication apparatus transmits the transmission power control information for regularly raising the transmission power of the second communication apparatus instead of the transmission power control information based on SIR measurement results before the first communication apparatus becomes able to synchronize with a signal from the second communication apparatus.

Consequently, before the first communication apparatus becomes able to synchronize with a signal from the second communication apparatus, the first transmission means (step) of the first communication apparatus transmits the transmission power control information for regularly raising the transmission power of the second communication apparatus. Therefore, before the first communication apparatus becomes able to synchronize with a signal from the second communication apparatus, the first reception means (step) of the second communication apparatus receives the transmission power control information, and the control means (step) of the second communication apparatus regularly raises the transmission power in accordance with the information.

Elements of dependent claims 15 and 22 are illustrated as follows. This drawing is based on the lower part of Fig. 43 of the present application.



Jensen (US Patent 5671219) discloses, on column 10, lines 59–67, that the base station 104 sends to a user station 102 a power control command for adjusting the power output level of the user station 102. In addition, the passage on column 20, lines 26–32, of Jensen discloses that the user station 102 and the base station 104 send a control pulse, i.e., the power control command 215.

The Examiner argued that the passages on column 10, lines 59–67 and column 20, lines 26–32 of Jensen are related to claims 15 and 22. However, the Examiner's argument is incorrect. Jensen does not disclose a change of scheme for power control before and after synchronization.

Thus, no combination of references teaches or suggests claim 15 or 22.

### Independent Claims 17 and 24

The comments described above in conjunction with independent claims 14, 16, 21, and 23 can also be applied for claims 17 and 24. Thus, neither Hakkinen nor Keskitalo discloses that the second transmission means for (step of) transmitting power control information regarding an

initial value of transmission power of another (second) communication apparatus to the another (second) communication apparatus.

The comments described above in conjunction with dependent claim 15 and 22 can also be applied for claims 17 and 24. Thus, no combination of references discloses transmitting transmission power control information for regularly raising the transmission power of the another (second) communication apparatus instead of the transmission power control information based on SIR measurement results before said (first) communication apparatus becomes able to synchronize with a signal from said another (second) communication apparatus.

### **Dependent Claim 18**

The Examiner argued that Hakkinen discloses means for varying a predetermined pattern (Fig. 3, column 6, lines 49-67, column 7, lines 1-25). However, although these passages are related to transmission power control information based on SIR measurement results, they are not related to the claim as now presented. The cited references fail to teach or suggest a means for varying a pattern of the transmission power control information for regularly raising the transmission power of the another communication apparatus.

In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; and/or (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under

37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to Deposit Account No. 23-3178.

In accordance with the amendments and discussion presented herein, the Applicants respectfully request favorable reconsideration of each of the pending claims. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at 801-533-9800.

Dated this 2<sup>nd</sup> day of November, 2009.

Respectfully submitted,



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Customer No. 022913

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